



SEQUENCE LISTING

<110> ~~DAIICHI~~ Nohyaku Co., Ltd.

<120> NOVEL PROTOPORPHYRINOGEN OXIDASE TOLERANT TO PHOTBLEACHING HERBICIDE

<130> Q58140

<140> 09/508,418

<141> 2000-03-13

<150> JP 9-265084

<151> 1997-09-11

<160> 11

<170> PatentIn version 3.0

<210> 1

<211> 1874

<212> DNA

<213> Nicotiana tabacum

<220>

<221> exon

<222> (26)..(1672)

<220>

<221> misc_feature

<223> Strain name: Xanthi NC

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Pro Asn Ile Phe Thr His Gln Ser Ser Ser Ser Pro Leu Ala Phe Leu
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aac cgt acg agt ttc atc cct ttc tct tca atc tcc aag cgc aat agt      148
Asn Arg Thr Ser Phe Ile Pro Phe Ser Ser Ile Ser Lys Arg Asn Ser
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gtc aat tgc aat ggc tgg aga aca cga tgc tcc gtt gcc aaa gat tac      196
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Thr Val Pro Ser Ser Ala Val Asp Gly Gly Pro Ala Ala Glu Leu Asp
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Cys Val Ile Val Gly Ala Gly Ile Ser Gly Leu Cys Ile Ala Gln Val
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gcc ggt ggc aac ata acg act gtg gaa aga gac ggc tat ttg tgg gaa			388
Ala Gly Gly Asn Ile Thr Thr Val Glu Arg Asp Gly Tyr Leu Trp Glu			
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Glu Gly Pro Asn Ser Phe Gln Pro Ser Asp Pro Met Leu Thr Met Ala			
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Pro Arg Phe Val Leu Trp Lys Gly Lys Leu Arg Pro Val Pro Ser Lys			
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Leu Thr Asp Leu Pro Phe Phe Asp Leu Met Ser Ile Pro Gly Lys Leu			
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Arg Ala Gly Phe Gly Pro Ile Gly Leu Arg Pro Ser Pro Pro Gly His			
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Phe Glu Arg Leu Ile Glu Pro Phe Cys Ser Gly Val Tyr Ala Gly Asp			
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ccc tca aaa ctg agt atg aaa gca gca ttt ggg aaa gtt tgg aag ttg			772
Pro Ser Lys Leu Ser Met Lys Ala Ala Phe Gly Lys Val Trp Lys Leu			
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Pro Lys Gly Gln Thr Val Gly Ser Phe Arg Lys Gly Leu Arg Met Leu			
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 Val Thr Gly Phe Leu Ser Arg Tyr Ala Tyr Lys
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 <223> Strain name: SR1

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 Thr Arg Cys Ser Val Ala Lys Asp Tyr Thr Val Pro Ser Ser Ala Val
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 Asp Gly Gly Pro Ala Ala Glu Leu Asp Cys Val Ile Val Gly Ala Gly
 65 70 75 80

 Ile Ser Gly Leu Cys Ile Ala Gln Val Met Ser Ala Asn Tyr Pro Asn
 85 90 95

 Leu Met Val Thr Glu Ala Arg Asp Arg Ala Gly Gly Asn Ile Thr Thr
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 Val Glu Arg Asp Gly Tyr Leu Trp Glu Glu Gly Pro Asn Ser Phe Gln
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 Pro Ser Asp Pro Met Leu Thr Met Ala Val Asp Cys Gly Leu Lys Asp
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 Pro Asn Ile Phe Thr His Gln Ser Ser Ser Ser Pro Leu Ala Phe Leu
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 Val Asn Cys Asn Gly Trp Arg Thr Arg Cys Ser Val Ala Lys Asp Tyr
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Ala Gly Gly Asn Ile Thr Thr Val Glu Arg Asp Gly Tyr Leu Trp Glu	
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Val Asp Cys Gly Leu Lys Asp Asp Leu Val Leu Gly Asp Pro Asn Ala	
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Pro Arg Phe Val Leu Trp Lys Gly Lys Leu Arg Pro Val Pro Ser Lys	
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Leu Thr Asp Leu Pro Phe Phe Asp Leu Met Ser Ile Pro Gly Lys Leu	
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Arg Ala Gly Phe Gly Ala Ile Gly Leu Arg Pro Ser Pro Pro Gly His	
190 195 200	
gag gaa tca gtt gag cag ttc gtg cgt cgt aat ctt ggt ggc gaa gtc	676
Glu Glu Ser Val Glu Gln Phe Val Arg Arg Asn Leu Gly Gly Glu Val	
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Phe Glu Arg Leu Ile Glu Pro Phe Cys Ser Gly Val Tyr Val Gly Asp	
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Pro Ser Lys Leu Ser Met Lys Ala Ala Phe Gly Lys Val Trp Lys Leu	
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Glu Arg Ser Ser Thr Pro Lys Ala Pro Arg Asp Pro Arg Leu Pro Lys	
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Pro Lys Gly Gln Thr Val Gly Ser Phe Arg Lys Gly Leu Arg Met Leu	
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Val Thr Gly Phe Leu Ser Arg Tyr Ala Tyr Lys				
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 Thr Pro Asp Gly Leu Val Ser Val Gln Ser Lys Ser Val Val Met Thr
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 Val Pro Ser His Val Ala Ser Gly Leu Leu Arg Pro Leu Ser Glu Ser
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 Ser Ile Ser Tyr Pro Lys Glu Ala Ile Arg Thr Glu Cys Leu Ile Asp
 370 375 380
 Gly Glu Leu Lys Gly Phe Gly Gln Leu His Pro Arg Thr Gln Gly Val
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 420 425 430
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 Gly Tyr Glu Gly Leu Phe Leu Gly Gly Asn Tyr Val Ala Gly Val Ala
 500 505 510
 Leu Gly Arg Cys Val Glu Gly Ala Tyr Glu Thr Ala Ile Glu Val Asn
 515 520 525
 Asn Phe Met Ser Arg Tyr Ala Tyr Lys
 530 535